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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,566	10/07/2003	Muriel Martinez	4717-4800	9459
28765	7590	07/18/2006		
WINSTON & STRAWN LLP 1700 K STREET, N.W. WASHINGTON, DC 20006				
			EXAMINER OSELE, MARK A	
			ART UNIT 1734	PAPER NUMBER

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/681,566

Applicant(s)

MARTINEZ ET AL.

Examiner

Mark A. Osele

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 23-444 is/are pending in the application.
- 4a) Of the above claim(s) 25-29, 31, 36-40 and 42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-24, 30, 32-35, 41, 43-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Newly submitted claims 36-40 and 42 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:  
The claims have the same limitations as previously presented claims 25-29 and 31, respectively, which were subject to restriction and withdrawn in applicants' election of February 18, 2005.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 36-40 and 42 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 23-24, 34-35 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,653,205 (Yanagita et al. '205). Yanagita et al. '205 shows a method of

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separating a layer of material from a source substrate by positioning a portion of a semiconductor substrate with a weakened area and a peripheral notch against a fixed positioning member, 202, which maintains the substrate in a predetermined position on a support, 203, and contacting the substrate with at least one blade, 210, to induce a cleaving wave into the substrate (column 7, lines 23-35; Fig. 7) with the cleaving wave being of sufficient intensity to divide the substrate at the notch into first and second parts to detach the layer from the substrate along the weakened area (column 4, line 54 to column 5, line 28).

Regarding claim 24, the blade vibrates which self adjusts the relative positions of the substrate and the blade along a direction perpendicular to the cutting plane as the blade contacts the notch (column 17, lines 2-59).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 23-24, 32, 34-35, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,653,205 (Yanagita et al. '205) in view of U.S. Patent 6,427,747 (Omi et al. '747). As shown in paragraph 2 above, Yanagita et al. '205 shows the instantly claimed invention, but fails to show that the semiconductor substrate is positioned peripherally against a fixed positioning member.

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Omi et al. '747 shows a semiconductor substrate separating method wherein the substrate is peripherally positioned in the groove, 412a, of a fixed positioning shaft, 412, to set the substrate in proper position (column 7, lines 41-49). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the fixed positioning shaft of Omi et al. '747 in the method of Yanagita et al. '215 to ensure that the semiconductor substrate is properly positioned for the cleaving operation.

6. Claims 30 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over over U.S. Patent 6,653,205 (Yanagita et al. '205) in view of U.S. Patent 6,427,747 (Omi et al. '747) as applied to claims 23 and 34 above, and further in view of U.S. Patent 6,436,226 (Omi et al. '226). The references as combined fail to show moving the support away from the substrate. Omi et al. '226 shows that during the mechanical separation step, the supports, 108, 109, are moved apart to facilitate creating a space for the separation of the layers of the substrate (column 9, lines 12-33). It would have been obvious to one of ordinary skill in the art at the time the invention was made to move the support of the references as combined when the separating blade contacts the annular notch to provide the space for separation as taught by Omi et al. '226.

7. Claims 33 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over over U.S. Patent 6,653,205 (Yanagita et al. '205) in view of U.S. Patent 6,427,747 (Omi et al. '747) as applied to claims 23 and 34 above, and further in view of U.S. Patent 6,979,629 (Yanagita et al. '629), U.S. Patent 6,263,941 (Bryan et al.), and U.S.

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Patent 6,415,843 (De et al.). The references as combined show the claimed limitations except for the shape of the shim and blade. Yanagita et al. '629 shows that a centering shim, 1001 or 1002, should have the same shape as the periphery of the semiconductor substrate, 30, being separated and cover at least on quarter of the periphery of the substrate (column 19, lines 55-67; Fig. 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the shim of the references as combined in the shape and size of the shim of Yanagita et al. '629 because this is shown to be effective in placing the semiconductor substrate in the proper position for the separation step.

Bryan et al. shows that a separating blade, 707, should have the same shape, 706, as the periphery, 711, of the semiconductor substrate, 703, being separated to evenly distribute the blade across the periphery of the substrate (column 11, lines 19-25; Fig. 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the separating blade of the references as combined in the shape of the periphery of the semiconductor substrate to distribute the blade and its forces around the periphery of the substrate as taught by Bryan et al.

De et al. shows a separating blade, 112, which covers more than one quarter of the periphery of the semiconductor substrate being separated so it can also be used as a support for the fragile portion of the substrate, 310, after separation (See Figs. 3, 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the size of the separating blade of the references as combined large

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enough to double as a support for the fragile layer after separation because De et al. shows this mechanism for performing two tasks.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 23-24 and 30 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

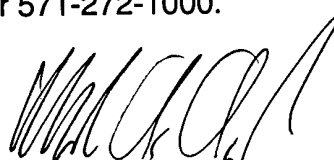
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Osele whose telephone number is 571-272-1235. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Fiorilla can be reached on 571-272-1187. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**MARK A. OSELE**  
**PRIMARY EXAMINER**

July 10, 2006